



Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <http://about.jstor.org/participate-jstor/individuals/early-journal-content>.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

METEOROLOGICAL SUMMARY FOR THE YEAR 1874.

PROF. F. H. SNOW'S ANNUAL REPORT.

Station, Lawrence, Kansas. Latitude $38^{\circ} 58'$; longitude $95^{\circ} 16'$. Elevation of barometer and thermometers, 884 feet above the sea level and 14 feet above the ground; rain gauge on the ground; anemometer 105 feet above the ground, on the dome of the University building.

TEMPERATURE.

Mean temperature of the year, $54^{\circ}.2$, which is $1^{\circ}.25$ above the mean of the six preceding years. The highest temperature was 108° , on the 5th of August; this being 4° higher than any previous observation on our seven years' record. The lowest temperature was 3° below zero, on the 29th of December; this being 2° higher than any previous annual minimum on our record. Mean temperature at 7 A. M., $47^{\circ}.88$; at 2 P. M., $62^{\circ}.49$; at 9 P. M., $50^{\circ}.18$.

Mean temperature of the winter months, $28^{\circ}.88$ — $0^{\circ}.08$ above the average; of the summer, $80^{\circ}.92$ — $4^{\circ}.53$ above the average; of the autumn, $53^{\circ}.92$ — $1^{\circ}.62$ above the average.

The coldest month of the year was February—the coldest February on our record—with mean temperature $27^{\circ}.5$; the coldest week was February 20th–26th, with mean temperature $19^{\circ}.24$; the coldest day was December 29, with mean temperature $7^{\circ}.3$. The mercury fell below zero but twice—January 3 and December 29.

The hottest month of the year was July, with mean temperature $83^{\circ}.62$; the hottest week was July 19th–25th, mean temperature $89^{\circ}.33$; the hottest days were August 5 and 11, which each had a mean temperature of 94° . The mercury reached or exceeded 90° on 58 days, viz.: 4 in May, 6 in June, 21 in July, 24 in August, and 3 in September. There were 9 days on which the mercury reached or exceeded 100° , viz.: July 24, 25, and August 5, 9, 10, 11, 12, 13 and 17.

The last light frost of spring was on April 23; the first light frost of autumn was on September 15, giving a period of 145 days entirely without frost. The last severe frost of spring was on April 9; the first severe frost of autumn was on October 23, giving a period of 207 days without severe frost. No cold weather during the year caused any damage to fruit.

RAIN.

The entire amount of rain, including melted snow, was 28.87 inches, which is the smallest annual rainfall on our seven years' record, and falls below the average rainfall of the past six years by 5.48 inches. Either rain or snow fell on 99 days, 4 less than the

average number. The longest interval without rain during the growing season, March 1 to October 1, was 15 days, from July 23 to August 9. The number of thunder showers was 20. The marked deficiency in the rainfall of July and August resulted in great damage to the crops in all parts of Kansas, and produced the only severe and extended drouth since 1860. The amount of excess or deficiency in the rainfall of each month of the year is indicated in the table appended to this report.

SNOW.

The entire depth of snow was 43 inches, distributed as follows : January, 7½ inches; February, 10 inches; March, 4 inches; November, 14 inches; December, 7½ inches. The last snow of spring was on April 16; the first autumn snow was on November 17. The annual amount of snow, as given above, is 20.58 inches above (nearly double) the average for the six preceding years.

FACE OF THE SKY.

Average cloudiness of the year 45.54 per cent. of the sky, which is only 0.06 per cent. below the average. The number of clear days (less than one-third cloudy) was 155; half clear days (between one-third and two-thirds cloudy) 108; cloudy (more than two-thirds) 102. There were 27 days without a cloud, and 30 days without a trace of sky. August was the clearest month, with a mean cloudiness of 24.95 per cent. March was the cloudiest month, mean cloudiness, 62.27 per cent. The mean cloudiness at 7 A. M. was 50.79 per cent.; at 2 P. M. 48.82 per cent.; at 9 P. M. 37 per cent.

DIRECTION OF THE WIND.

During the year (three observations daily) the wind was from the southwest, 335 times; northwest, 224 times; northeast, 190 times; southeast, 142 times; south, 76 times; north, 54 times; east, 42 times; west, 8 times; calm, 24 times. The south (including southeast, south and southwest) winds outnumbered the north (including northeast, north and northwest) winds in the ratio of 553 to 468.

VELOCITY OF THE WIND.

The number of miles traveled by the wind during the year was 145,865. This gives a mean daily velocity of 399.6 miles, and a mean hourly velocity of 16.62 miles. The position of the anemometer cups at an elevation of 105 feet above the ground, the most elevated point for many miles in all directions, secures exposure to the full force of the wind. The maximum velocity attained was 65 miles an hour on September 18. The greatest daily velocity was 1,061 miles on January 3. The strongest winds were in April and November; the lightest were in February and June.

BAROMETER.

Mean height of the barometer column, 29.121 inches. Mean at 7 A. M., 29.146 inches; at 2 P. M., 29.096 inches; at 9 P. M., 29.121 inches; maximum, 29.845 inches, at 7 A. M., January 24; minimum, 28.267 inches, at 2 P. M., November 22, this being the lowest reading on our record except that of January 16, 1870, 28.191 inches; yearly range, 1.578 inches. The highest monthly mean was in December, 29.235 inches; the lowest was in May, 29.027 inches. The barometer observations are corrected for temperature, but not for elevation, thus affording the means of determining the altitude of our station.

RELATIVE HUMIDITY.

Mean for the year, 65.52; at 7 A. M., 76.5; at 2 P. M., 49.18; at 9 P. M., 70.87. The dampest month was December, humidity 79.4; the driest month was August, humidity 49.02. There were 14 fogs during the year.

FORCE OF VAPOR (IN INCHES).

Mean for the year 0.319; at 7 A. M., 0.317; at 2 P. M., 0.310; at 9 P. M., 0.329; greatest, 0.863, at 9 P. M., July 30; least, 0.038 at 7 A. M. December 29; highest monthly mean in June, 0.603; lowest in January, 0.121.

The following table gives the mean temperature, the extremes of temperature, the relative humidity, and the rainfall for each month of the year 1874; also a comparison with preceding years:

Month.	Mean Temperature.	Max'm Temperature.	Min'm Temperature.	Relative Humidity.	Rainfall in Inches.	Excess or Deficiency of Rainfall.
January.....	28.01	61.0	-2.5	73.07	2.35	*1.04
February.....	27.50	49.0	2.0	78.21	0.95	+0.01
March.....	39.50	69.5	19.0	67.12	2.30	*0.23
April.....	48.07	83.0	22.5	57.73	2.86	+0.14
May.....	69.76	95.0	45.0	55.60	1.41	+2.68
June.....	77.11	95.0	53.5	66.02	3.58	+0.01
July.....	83.62	103.0	68.0	52.15	1.19	+3.96
August.....	83.45	108.0	65.0	49.02	1.00	+3.97
September.....	67.03	94.0	41.0	71.70	6.45	*3.23
October.....	56.01	89.0	19.5	67.20	1.92	+0.69
November.....	38.76	77.5	5.5	72.47	3.69	*2.08
December.....	31.01	55.5	-3.0	79.40	1.17	+0.58

* Excess. † Deficiency.

COMPARISON WITH PRECEDING YEARS.

Year.	Mean Temp.	Max. Temp.	Min. Temp.	Relative Humidity.	Rainfall in Inches.
1874.....	54.20	108.0	-3.0	65.52	28.81
1873.....	52.71	104.0	-26.0	64.06	32.94
1872.....	51.90	97.0	-18.0	64.40	32.63
1871.....	54.30	103.0	-6.0	33.23
1870.....	54.50	102.0	-10.0	68.40	31.38
1869.....	50.99	96.0	-5.0	38.51
1868.....	53.36	101.0	-16.5	37.42